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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,519	09/15/2003	Henry Behmann	4320-516	7835

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EXAMINER

FORTUNA, ANA M

ART UNIT PAPER NUMBER

1723

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/661,519

Applicant(s)

BEHMANN ET AL.

Examiner

Ana M. Fortuna

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/21/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. Claims 1, 3-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. RE37,449 E. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the present claims are overlapped by the limitations in the claims of the patent ('549). The fibers and fibers properties, the permeate collection pan, the headers and the conduits discharge in the permeate art all covered by claim 1 of the patent.

2. Claims 1, 3, 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 5,639,373. Although the conflicting claims are not identical, they are not patentably distinct from each other because the hollow fiber of the patent inherently possesses the submersible property. The claims in the present invention are directed to a membrane filtration device, the claims in the patent are limited to microfiltration membranes, both devices have the same structure and are capable of removing permeate from a substrate, in order to remove permeate the fibers need to be partly or totally immersed in the substrate, however in this apparatus claims, both hollow fiber assembly are capable of being immersed in the substrate in order to perform the filtration operation.

3. Claims 6-7, and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. RE 37549 E ('549), and further in view of JP 08-281082(hereinafter '082).

Reference '549 is discussed above. Reference '082 teaches backwashing immersed membranes and providing a tank for collecting permeate and cleaning the membrane with water by directing the water back to the permeate flow path (abstract and fig.) It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of '549 by collecting the permeate and backwashing the membrane with a portion of the collected permeate as suggested in '082). Adapting a system with a pressurized container capable of directing permeate back to the membranes, or applying a head of water or positive pressure to direct the water back to the permeate side of the membrane, for cleaning or dislodging the solids attached to the outside of the membrane as it would have been obvious to one skilled in the art at the time the invention was made.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claims above are overlapped by the limitations in the claims of the patent except for the backwashing with water or permeate, which is suggested by JP '082, and known at the time the invention was made.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-5, 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlos E. Rodriguez (RE37,549E)(hereinafter '549). All the limitations of the present invention are covered in the disclosure of '549, see claims and Figures 6, 9, elements 43 b, 12, 112, 45 u, and fig. 10, elements 51, 46 u).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

6. Claims 1, 3-4, 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlos Rodriguez (5,639,373). All the claimed limitations are found in the entire specification, and figures, as discussed in the Reissue discussed above.

7. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cote et al (5,248,424)(hereinafter '424) in view of Kopp et al (5,643,455)(hereinafter '455). Cote ('424) discloses a hollow fiber membrane module the fibers adapted to be immersed in a tank, all the fibers properties, including length, surface area are disclosed in '424 (column 10, lines 15-68, , though column 11, lines 1-5, column 12, lines 38-61, column 13, lines 29-31). The solid body or headers are also disclosed (column 16, lines 53-66), the permeate pan is disclosed (column 18, third paragraph), a gas distribution system and conduits for withdrawing permeate are disclosed in '424 (column 20, lines 16-27, and line 68 through column 21, lines 1-2). Positioning the membrane module with the headers in a vertically space apart relationship is also disclosed (column 28, lines 49-53). Reference '424 fails to disclose the distance of the headers with respect to the length of the fibers. Reference '424, however, suggests selecting the fibers with longer distance than the distance separating the headers in which the end terminal portion of the fibers is potted (column 10, lines 43-46). It would a have been obvious to

one skilled in the art at the time the invention was made to increase the length of the fibers to a suitable length depending on whether an actuate or an straight vertical configuration of the fibers is desire for the final module or skein of fibers as suggested in '424 . By selecting short length fibers and providing only 0.1 percent of additional length as compared to the distance between headers, a substantially vertical or straight fibers arrangement can be obtained in the skein. Additionally, there is not limitation on the arrangement of the skein, e.g. vertical arrangement in the tank or reservoir is also suggested.

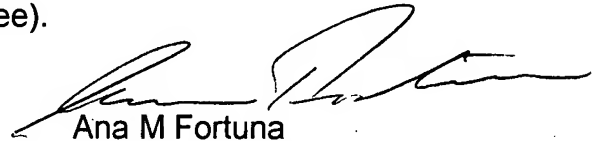
10. Regarding claims 6, 7, and 12, Reference '424 recognizes and discloses cleaning hollow fiber membranes, immersed, by backwashing with permeate (column 8, lines 28-44).

Reference to Kopp ('455) is cumulative as showing vertically immersed hollow fiber membrane module, the header or potting material and the permeate pan, permeate collection system (abstract, Fig. 14).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana M Fortuna  
Primary Examiner  
Art Unit 1723

AF